

1 Paul J. Hayes (*pro hac vice*)  
 2 Kevin Gannon (*pro hac vice*)  
 3 Steven E. Lipman (*pro hac vice*)  
 4 HAYES MESSINA GILMAN & HAYES, LLC  
 5 200 State Street, 6<sup>th</sup> Floor  
 6 Boston, MA 02109  
 7 phayes@hayesmessina.com  
 8 kgannon@hayesmessina.com  
 9 slipman@hayesmessina.com  
 10 Telephone: (978) 809-3850  
 11 Facsimile: (978) 809-3869

12 Attorneys for Plaintiff  
 13 ADAPTIX, INC.

14 **UNITED STATES DISTRICT COURT**  
 15 **NORTHERN DISTRICT OF CALIFORNIA**  
 16 **SAN JOSE DIVISION**

17 ADAPTIX, Inc.,  
 18 Plaintiff,

19 v.

20 MOTOROLA MOBILITY LLC, *et al.*,  
 21 Defendants.

Case No. 5:13-cv-01774-PSG

**PLAINTIFF'S REPLY CLAIM  
 CONSTRUCTION BRIEF**

22 ADAPTIX, Inc.,  
 23 Plaintiff,

24 v.

25 APPLE, INC., *et al.*,  
 26 Defendants.

Case No. 5:13-cv-01776-PSG

27 ADAPTIX, Inc.,  
 28 Plaintiff,

v.

APPLE, INC., *et al.*,  
 Defendants.

Case No. 5:13-cv-01777-PSG

ADAPTIX, Inc.,  
 Plaintiff,

v.

AT&T MOBILITY LLC, *et al.*,  
 Defendants.

Case No. 5:13-cv-01778-PSG

1	ADAPTIX, Inc.,	Case No. 5:13-cv-01844-PSG
2	Plaintiff,	
3	v.	
4	CELLCO PARTNERSHIP <i>d/b/a</i>	
5	VERIZON WIRELESS, <i>et al.</i> ,	
6	Defendants.	
7	ADAPTIX, Inc.,	Case No. 5:13-cv-02023-PSG
8	Plaintiff,	
9	v.	
10	APPLE, INC., <i>et al.</i> ,	
11	Defendants.	

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1 Plaintiff ADAPTIX, Inc. (“ADAPTIX”), respectfully submits its Reply Claim Construction Brief  
2 regarding the disputed claim terms of U.S. Patent Nos. 6,947,748 (“748 Patent”) and 7,454,212 (“212  
3 Patent”) (collectively, “Patents-in-Suit”).

4 **I. INTRODUCTION**

5  
6 From the outset, Adaptix has maintained that the meaning of the claim terms in the Patents-in-  
7 Suit are clear on their face. In contrast, Defendants have proposed constructions that contradict both  
8 the language of the claims and the underlying intrinsic evidence.

9 Defendants’ proposed constructions also ignore the basic principles of claim construction  
10 because they attempt to improperly import limitations on the scope of the claims from the  
11 specification, despite the lack of recitation of any such limitations in the claims themselves. *Phillips*  
12 *v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (“[A]lthough the specification often describes  
13 very specific embodiments of the invention, we have repeatedly warned against confining the claims  
14 to those embodiments”). There is an exception to the general rule against reading limitations from the  
15 specification into the claims when the patentee demonstrates “intent to deviate from the ordinary and  
16 accustomed meaning of a claim term by including in the specification expressions of manifest  
17 exclusion or restriction, representing a clear disavowal of claim scope.” *Thorner v. Sony Computer*  
18 *Ent. Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012). Therefore, to prevail on their disavowal  
19 argument, Defendants must point to a portion of the specification that expresses “manifest exclusion  
20 or restriction, representing a clear disavowal of claim scope,” and they cannot do so.

21 In this light, Defendants’ Brief is nothing more than an exercise in manufacturing potential  
22 non-infringement positions. Defendants systematically isolate terms to specific disclosures in the  
23 specification and then read those limitations into unambiguous claim language. With the limitations  
24 pre-read into the claims, Defendants then proceed through their claim construction analysis. This  
25 overall approach results in constructions untethered from the intrinsic record. As set out in more  
26 detail below, it should be rejected for each of the terms in dispute.

## II. BACKGROUND

ADAPTIX's '748 and '212 patents issued based on a patent application filed on December 15, 2000 – the same year plaintiff ADAPTIX's predecessor Broadstorm was formed. One of the inventors, Hui Liu, was both a founder and CEO of the company. The company developed OFDMA-related technology that several years later would be utilized in products compliant with the 3GPP LTE standard for mobile communications systems.

Modern mobile communication involves mobile service subscribers carrying smartphones with them while traveling in a car or train, walking, or sitting in a coffee shop. For example, a grandmother phones her grandchild, views family photos on Facebook, and sends text messages. The smartphone is connected (via a radio interface) to a cellular base station, which provides further connections to a phone network for the phone call, to the Internet for Facebook, and to another mobile network for the text messages.

ADAPTIX's patents are directed to aspects of the company's OFDMA-related technology now used by a growing number of mobile subscribers. Those aspects concern the radio interface between subscriber devices (*e.g.*, smartphones) and a cellular base station, and how resources that form the radio interface are allocated and adjusted for each subscriber.

OFDMA is a type of "multiple access procedure" described by one reference cited in the '212 patent file history as a "radio interface across which data symbols can be transmitted between a fixed base station and usually several mobile stations in a radio coverage area – *e.g.*, a radio cell." Declaration of Kevin Gannon, Ex. 1 at 2. A few "classic" multiple access procedures include time division multiple access (TDMA) "in which the data symbols are contained in bursts in a time slot[,]" and code division multiple access (CDMA) "in which each data symbol is splayed with several code symbols on a certain bandwidth." With OFDMA, "a number of sub-carriers [forming] a segment of a frequency spectrum can be allocated for the communication link between the base station and the mobile station." *Id.* In order to carry out OFDMA, the reference teaches a number of steps. *Id.* First, the quality of various segments of the frequency spectrum is measured through each mobile station. *Id.* Then, at least one suitable segment preferred for its own communication link is determined

1 through each mobile station and the transmission of appropriate information to the base station. *Id.*  
2 The information received from the mobile stations is evaluated through the base station, and a segment  
3 is allocated for the respective communication link to each mobile station depending on the evaluation.  
4 *Id.* Finally, information is transmitted across the allocated segment to each mobile station through the  
5 base station. *Id.*

6 Defendants' description in the background of their Brief lacks basis and departs from the  
7 intrinsic record. For example, Defendants rely on a book entitled "Fundamentals of LTE" that was  
8 published in 2011 – eleven years after the filing of the patent application that led to the Patents-in-  
9 Suit, to conclude "Adaptix did not invent any of this technology." Defendants' Responsive Brief at 2-  
10 3. The cited book is not only extrinsic, but it is clearly not evidence of prior art. Moreover,  
11 Defendants fail to mention how their assertion is relevant to the claim construction issues before the  
12 Court.

13 Defendants also provide self-serving characterizations of the specification in common to the  
14 '748 and '212 patents. *Id.* at 3-5. For example, Defendants infer that the inventors did not want to  
15 "flood the base station with reports on the quality of reception of all subcarriers." *Id.* at 3 ("Rather  
16 than flood the base station with reports on the quality of reception of all subcarriers, the claimed  
17 inventions instead require each subscriber to make a preliminary selection..."). There is no mention  
18 of a concern over "flooding" or otherwise inundating the base station with too much information at the  
19 portions of the specification cited by Defendants. The conclusion Defendants ask the Court to make is  
20 unhinged from the intrinsic record.

21 While acknowledging that there are two competing 4G standards that employ OFDMA, the  
22 wireless interoperability microwave access (WiMAX™) and the long-term evolution (LTE™),  
23 Defendants argue that the Patents-in-Suit are somehow limited to WiMAX. Defendants' Responsive  
24 Brief at 2. Defendants' argument is baseless because the claims at issue in this case are not and cannot  
25 be based on the type of infrastructure that distinguishes WiMAX from LTE, both of which are  
26 standards that evolved well after the filing that led to the Patents-in-Suit. In support of their argument,  
27 Defendants allege that certain asserted claims are "congruent with techniques described in the  
28 WiMAX standard." *Id.* at 5. However, here Defendants cite to a reference that is not part of the

intrinsic record and that cannot be part of the intrinsic record or otherwise be relevant as it was published in 2007 – seven years after the filing of the patent application on which the patents are based. *Id.* at 5. Accordingly, this discussion is also misleading and lacking in relevance to the claim construction issues at hand.

### III. ARGUMENT

#### A. “(select[ing]) a set of candidate subcarriers” (’748, claims 6, 8, 19, 21; ’212, claims 1, 18)

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“selecting”: “choosing”	“selecting”: “choosing”
otherwise, plain and ordinary meaning; no construction necessary	“choos[ing] a set of subcarriers desired by the subscriber for use”

The claim language makes clear that the “set” of subcarriers selected to be the set of candidate subcarriers, does not need to be a subset as advocated by Defendants. In other words, the claim language is agnostic as to whether the set is all of the subcarriers or just a subset of the subcarriers. The claim language is contrary to Defendants’ proposed construction.

The specification is consistent with this reading. The specification indicates that the “set of candidate subcarriers” can include all of the subcarriers that are available. For example, the selection of all subcarriers as candidates is contemplated in the following embodiment:

[E]ach subscriber first measures the channel and interference information for all the subcarriers and then selects multiple subcarriers with good performance (e.g., a high signal-to-interference plus noise ratio (SINR)) and feeds back the information on these candidate subcarriers to the base station. The feedback may comprise channel and interference information (e.g., signal-to-interference plus-noise-ratio information) **on all subcarriers or just a portion of subcarriers.**

’748 patent, 3:7-15 (emphasis added). The specification therefore describes that the subscriber may measure the channel and interference information on all subcarriers and then select, as the candidate subcarriers, all of the subcarriers and give feedback on all of the subcarriers. Defendants’ proposed construction would not cover this preferred embodiment. The Federal Circuit has held, “a claim interpretation that excludes a preferred embodiment from the scope of the claim is rarely, if ever,



correct.” *On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH*, 386 F.3d 1133, 1138 (Fed. Cir. 2004). Accordingly, Defendants’ proposed construction should be rejected.

Finally, to the extent that the Court prefers that a proposed construction be provided for this term, consistent with the above arguments, Adaptix proposes that the term “a set” be construed to mean “all or a subset.”

**B. “subcarriers [of/from] the set of subcarriers selected by the [first] base station” (’748, claims 6, 8, 19, 21; ’212, claim 1, 3, 18)**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
plain and ordinary meaning; no construction necessary	“subcarriers that the base station has chosen from the set of candidate subcarriers selected by the subscriber”

The intrinsic evidence does not provide any special meaning for the term “subcarriers [of/from] the set of subcarriers selected by the [first] base station.” Thus, the ordinary and customary meaning to a person of ordinary skill in the art at the time of the invention applies. *Phillips*, 415 F.3d at 1313. The ordinary meaning of the words adequately expresses what is covered by the claim and any attempt to further define it would only heighten the potential for jury confusion. *Accumed LLC v. Stryker Corp.*, 483 F.3d 800, 805 (Fed. Cir. 2007). Defendants’ proposed construction unnecessarily inserts language about subscriber selection, reorders the claim language and risks confusion.

Moreover, Defendants’ proposed construction improperly limits the scope of the claim to the description of the preferred embodiments, *i.e.*, “the base station further selects one or more clusters for the subscriber among the candidates.” ’748 patent, 3:20-27; 6:9-11. Here, the specification does not disavow claim scope and certainly does not warrant importation of this limitation into the claims. Therefore, Defendants’ proposed construction should be rejected.

**C. “index indication of a candidate cluster with it(s) ((SINR) value)” (’748, claims 6, 19)**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
no construction necessary; plain and ordinary meaning	“identifier (ID) of a chosen candidate cluster of subcarriers accompanied by its SINR value”

1 The Defendants confirm that they are asking the Court to read two limitations into the claim  
2 from the specification: (1) an “identifier (ID)...accompanied by its SINR value;” and (2) “a *chosen*  
3 set of subcarriers.” Both should be rejected.

4 Defendants rely on Figure 5 from the patent to import the first limitation. Defendants’ Brief at  
5 16-17. As the description accompanying Figure 5 makes clear, the Figure is “one embodiment” and  
6 “[a]n exemplary format for arbitrary cluster feedback.” ’748 patent at 10:49-52. This example from  
7 the specification cannot be used to narrow the claim. To try and counter this infirmity, Defendants  
8 only offer that Figure 5 discloses an exemplary format but not content. Defendants’ Brief at 17. This  
9 is semantics. The content is a component of the format. Moreover, the patent discloses alternative  
10 content. ’748 patent, 10:65-11:2. Likewise, Defendants’ citation to Figure 7 relies on an express  
11 example from the specification. Described as illustrating an “exemplary format,” this specification  
12 cite again cannot limit the claim. ’748 patent, 12:13-14.

13 With respect to the second proposed limitation, “a chosen set of subcarriers,” Defendants argue  
14 that because “selecting” is agreed to mean “choosing” then “selected” means “chosen.” Defendants’  
15 Brief at 18. But neither selected nor chosen is used in this part of the claim. Without a term to find a  
16 home for its limitation, Defendants’ proposed construction should be rejected. *NTP, Inc. v. Research*  
17 *in Motion, Ltd.*, 418 F.3d 1282, 1310 (Fed. Cir. 2005).

18 Therefore, Defendants’ proposed construction should be rejected.

19 **D. “SINR value” (’748, claims 6 and 19)**

20 Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
21 “value indicative of a Signal to Interference plus Noise Ratio”	“Signal-to-Interference-plus-Noise-Ratio measurement”

22 Defendants assert that “SINR value” should be limited because of how other claims use the  
23 term “SINR” (a different term than “SINR value”). Defendants’ Brief at 13. For example,  
24 Defendants point out how claim 19 of the ’212 patent recites that “SINR” is measured. *Id.*  
25 Defendants further urge the court to limit the term “SINR value” to “SINR measurement” because in  
26 certain embodiments disclosed in the specification “SINR” (again, a different term) is measured. *Id.*  
27 at 14.  
28

The term “SINR” is not the same as “SINR value” – indicating a lexicographic intent to distinguish the two terms. This is also done in the specification. For example, the specification explains in one embodiment how the SINR of each subcarrier cluster may be measured, while SINR values different than the SINR measurements are reported to the base station, ’748 Patent, 5:53-62 (the reported “SINR value may comprise the average of the SINR values...[,] the worst SINR among the SINR values...[, or] a weighted averaging of SINR values...”). Contrary to what Defendants argue, these averages of measurements are not the measurements themselves, but are values derived from measurements.

As another example of how one may use a term other than “SINR” by itself to distinguish from SINR per se, the specification also uses the term “SINR information,” *e.g., id.*, 10:49-64, to refer to information related to SINR but not necessarily the SINR itself. Namely, such “SINR information,” *id.* at 64, is described in the embodiment as being a “cluster index (ID) to indicate the cluster and its associated SINR value.” *Id.*, 10:52-54.

The term “value” captures this broader scope. That scope should control. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004). Thus, in accordance with the intrinsic record, a SINR “value” should be construed simply as “a value indicative of a SINR.”

**E. “a system employing orthogonal frequency division multiple access (OFDMA)” (’748, claims 6, 8; ’212, claim 1)**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
as to “OFDMA”: orthogonal frequency division multiple access; otherwise, no construction necessary; plain and ordinary meaning	“a system using orthogonal frequency division multiple access (OFDMA) for downlink and uplink communications”

**F. “subcarrier allocation for OFDMA” (’748, claim 11)**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
as to “OFDMA”: orthogonal frequency division multiple access; otherwise, no construction necessary; plain and ordinary meaning	“OFDMA subcarrier allocation for downlink and uplink communications”

**G. “OFDMA subcarriers” (’748, claim 11, 19, 21; ’212, claim 18)**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
as to “OFDMA”: orthogonal frequency division multiple access; otherwise, no construction necessary; plain and ordinary meaning	“OFDMA subcarriers for downlink and uplink communications”

There are two distinct issues that Defendant’s conflate in arguing that the claims somehow require OFDMA on the uplink: (1) OFDMA subcarrier allocation for the downlink subcarriers; and (2) the uplink and downlink communication used when allocating the downlink subcarriers. Defendants’ Brief at 18-22. Defendants try to read the downlink OFDMA subcarrier allocation into the uplink communication.

The plain meaning of the OFDMA terms are broad. In isolation, a “system employing OFDMA” plainly encompasses a system employing OFDMA only on the downlink or OFDMA only on the uplink or both. It is not restricted to the conjunction of uplink *and* downlink. Similarly, “subcarrier allocation for OFDMA” and “OFDMA subcarriers” on their own encompass allocating downlink OFDMA subcarriers or uplink OFDMA subcarriers or both. Again, it is not restricted to the conjunction.

The surrounding claim language clarifies that each and every asserted claim pertains to downlink OFDMA subcarrier allocation. In particular, the subscriber feedback step occurs for downlink subcarrier allocation because the base station otherwise would not know the relative performance of the downlink subcarriers. By contrast, the Patents-in-Suit disclose a methodology for uplink subcarrier allocation but do not direct any claims to it. ’748 patent, 3:50-51. Thus, a person of ordinary skill in the art would interpret the claims as directed to the allocation of downlink OFDMA subcarriers.

Defendants do not meaningfully dispute these points, but instead assert that it somehow ignores the uplink *communication*. With respect to the uplink communication, the relevant claim language is also broad. For example, following Defendants’ representative claim 6, the uplink communication involves “the subscriber providing feedback information on the set of candidate

subcarriers to the base station.” ’748 patent, 17:50-51. The plain language of this phrase clearly encompasses providing feedback on the uplink not using OFDMA.

Defendants nevertheless assert that this broad term should be narrowed to using OFDMA on the uplink and downlink because the claim is agnostic. Defendants’ Brief at 19-20. In essence, Defendants’ position is that a term which can be interpreted as using (A) or (B) or both (A) and (B) should be limited only to (A) and (B). There is no canon of construction which limits a broad term in this fashion. Not surprisingly, Defendants provide no support for this novel claim construction methodology.

In fact, Defendants concede that the specification is broader than requiring OFDMA on the uplink and downlink. *Id.* at 20. Yet, they want to limit the scope of claims that are consistent with that broader disclosure. In support, they cite to the only passage showing OFDM on the uplink. *Id.* at 20-21. They conveniently ignore that the bulk of the specification’s disclosure and the plain language of the claim relate to allocating downlink OFDMA subcarriers. *See* Plaintiff’s Opening Brief at 11. This single passage relied upon by Defendants cannot narrow the plain language of the claim supported by numerous passages in the specification.

#### H. “(arbitrarily ordering) (’748, claims 6, 19; ’212, claims 13, 28)

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
as to “arbitrarily ordering/ordered”: “based on or determined by individual preference or convenience”	as to “arbitrarily ordering”: Defendants have proposed a larger claim phrase for construction. <u>Alternate</u> : “ordering in a manner not previously defined”

The parties agree that “arbitrarily ordering” involves providing a cluster index to identify the clusters for which feedback is being sent. *See* Defendants’ Brief at 22. In order not to use an index, the Patents-in-Suit teach that the base station must: (1) receive feedback on all clusters **and** (2) know the order in which it is receiving the feedback. ’748 patent, 5:65-6:4. Without both conditions, the base station would have no way to determine to which cluster the feedback relates. Defendants seek to define “arbitrarily ordering” in the negative by saying it is when condition (2) is not satisfied. Defendants’ Brief at 22-23. This position is

logically incorrect. In order to define “arbitrarily ordering” in the negative, it would be when the base station: (1) does not receive feedback on all clusters; *or* (2) does not know the order in which it is receiving the feedback.

There is no reason, however, to define “arbitrarily ordering” in the negative. As Defendants point out in their brief, the claim “further requires that the subscriber’s feedback information include ‘an index indication of a candidate cluster with its SINR value.’” Defendants’ Brief at 22. Thus, the plain language of the claim captures the specification’s teaching that “arbitrarily ordering” involves providing a cluster index to identify the clusters. In this context, “arbitrarily ordering” in isolation does not need to deviate from its plain and ordinary meaning. ADAPTIX’s proposed construction is consistent with this point.

#### I. “intra-cell traffic load balancing” (’748, claim 11)

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
no construction necessary; plain and ordinary meaning	“balancing cluster usage within a cell of a base station”

Defendants’ proposed construction seeks to redefine “load balancing” as “balancing cluster usage.” Defendants assert that the plain language of the claims supports this construction because claim 11 of the ’748 patent relates to allocation of clusters. Defendants do not bother to state that the term “intra-cell traffic load balancing” also appears in claim 1 of the ’748 patent. In that claim, there is a step involving “the subscriber selecting a set of candidate subcarriers, wherein the subscriber selects candidate *subcarriers* based, at least in part, on the *intra-cell traffic load balancing*.” ’748 patent, 16:53-56. Following Defendants’ logic, “intra-cell traffic load balancing” must occur at the subcarrier level for this claim. There is nothing in the claims or specification requiring that “intra-cell traffic load balancing” have a definition relative to whether subcarriers are allocated in clusters or not. The term “intra-cell traffic load balancing” does not have one meaning in one claim and a different meaning in a different claim.

Defendants also assert that “intra-cell” should mean “within a cell of a base station” proposed construction. As stated in the Plaintiff’s Opening Brief, the specification does not limit “intra-cell” to

1 “within a cell of a base station.” Plaintiff’s Opening Brief at 14. Defendants’ proposed construction  
 2 should be rejected on this point.

#### 3 **IV. CONCLUSION**

4  
 5 For the reasons set forth above, the Court should adopt ADAPTIX’s proposed claim  
 6 constructions and reject Defendants’ unsupported definitions.

7  
 8 Dated: November 25, 2013

By: /s/ Paul J. Hayes

Paul J. Hayes (*pro hac vice*)

Kevin Gannon (*pro hac vice*)

Steven E. Lipman (*pro hac vice*)

**HAYES MESSINA GILMAN & HAYES, LLC**

200 State Street, 6<sup>th</sup> Floor

Boston, MA 02109

Tel: (978) 809-3850

Fax: (978) 809-3869

phayes@hayesmessina.com

kgannon@hayesmessina.com

slipman@hayesmessina.com

Telephone: (978) 809-3850

Facsimile: (978) 809-3869

Christopher D. Banys

Richard C. Lin

Daniel M. Shafer

cdb@banyspc.com

rcl@banyspc.com

dms@banyspc.com

**BANYS, P.C.**

1032 Elwell Court, Suite 100

Palo Alto, CA 94303

Telephone: (650) 308-8505

Facsimile: (650) 353-2202

**Attorneys for Plaintiff**

**ADAPTIX, INC.**